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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,738	01/09/2001	William L. Bong	ARC 01.002	7735

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Michael A. Kerr  
Virtual Legal  
P.O. Box 2345  
Stateline, NV 89449

EXAMINER

KERNS, KEVIN P

ART UNIT	PAPER NUMBER
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1725

9

DATE MAILED: 03/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/757,738

Applicant(s)

BONG, WILLIAM L.

Examiner

Kevin P. Kerns

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s): \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Drawings***

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

2. Figures 1a-1e should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "29a" and "29b" in Figure 1d, as disclosed on page 4, line 12. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "32" (Figure 1e), "262" (Figure 5), "358" (Figure 6c), and "480" (Figure 9). A proposed

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drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "236" of Figure 3a has been used to designate both "strips" and "welding wires" on page 14 of the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to because of the following errors: in Figure 2a, both instances of "4b" should be changed to "2b" near the bottom of the figure. In Figure 3a, 3 reference numbers are difficult to see, as they are located in the upper shaded rectangular area. Also in Figure 3, a reference number ("232" or "236"?) appears to be directed incorrectly to guide tube "228". In Figures 6a and 6c, both instances of "2b" should be changed to "6b" near the bottom of the figures. In Figure 6c, "60" should be changed to "360". The applicant is advised to review these and other drawing reference numbers for corrections and/or clarifications. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

7. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

8. The use of the trademark "Arcmatic" on page 18, line 16, has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

9. The disclosure is objected to because of the following informalities: on page 9, line 10, "4a" should be changed to "2a". On page 10, line 21, ", now US Patent 6,297,472," should be added after "09/058,741". On pages 11 and 12, all instances of the designation "<sup>2</sup>" should be changed appropriately. On page 13, lines 18 and 19, "FIG. 4a and FIG. 4b" should be changed to "FIG. 2a and FIG. 2b". On page 16, line 5,

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it is unclear what is meant by the term "charpy". On page 17, line 13, "FIG. 7" should be changed to "FIG. 3". On page 19, line 4, "3a" should be changed to "3b". On page 21, line 15, "180" should be changed to "280". On page 23, line 14, "354" after "modules" should be changed to either "358" or "46". On page 24, line 16, "376 and 378" should be changed to "386 and 388". On page 24, last line, "406" should be added after "third strip". On the same line, "104" should be changed to "404". On page 26, line 8, "480" should be added after "FIG. 9 is a method". Corrections and/or clarifications are required for these and other errors that occur throughout the specification.

### ***Claim Objections***

10. Claim 9 is objected to because of the following informalities: in line 7 of the claim, "channels" should be changed to "channel". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1, 4-10, 12-15, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanenbaum (US 3,325,619).

Tanenbaum discloses a consumable nozzle for electrosag welding, in which at least two sections (each containing a longitudinal depression on one face) are joined to form an open-ended channel through which a welding wire is fixed (column 1, lines 60-68; column 2, lines 58-67; and Figures 1-8). The two (or more) sections 26 and 28 of half-round configuration may be varied to be oval, rectangular, hexagonal etc., provided that at least one longitudinal depression is defined on one of the plane faces of the sections (column 2, lines 62-72; column 3, lines 1-3; and Figures 1-8). The sections are surrounded by a plurality of spaced-apart ceramic rings (insulator modules) composed of a fluxing material, used for the purpose of insulating the consumable nozzle (column 2, lines 4-15; column 3, lines 23-36; column 4, lines 1-5; and Figures 1 and 8). One of ordinary skill in the art would have recognized that the geometry of the two or more sections (in terms of sizes and shapes) would be modified to provide strips each with a front face and back face, as it is well known that the half-round sections above would not have two (planar) faces, but the rectangular sections would have two planar faces defined by longitudinal channels to receive a welding wire and to be surrounded by ceramic rings, or insulator modules. With regard to the materials to be used in the sections/strips, it would have been obvious to one having ordinary skill in the art at the

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time the invention was made to use either cold rolled or hot rolled low carbon steel strip, among a variety of suitable welding materials, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

14. Claims 2, 3, 11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanenbaum (US 3,325,619) in view of Bong et al. (US 6,297,472).

Tanenbaum discloses or suggests all elements of claims 1, 9, and 13 above. Tanenbaum does not specifically disclose the oscillating guide tube and two or more longitudinal channels in the first strip.

However, Bong et al. disclose a welding system with electrode oscillation, in which a consumable round or winged guide tube (or dual guide tubes), positioned between plates having one or more longitudinal channels, hold welding wire(s) therebetween (abstract; column 1, lines 5-13; column 4, lines 11-31 and 53-57; column 5, lines 16-36; column 8, lines 39-43; column 13, lines 50-59; column 16, lines 30-50; column 18, lines 13-16; column 20, lines 10-19; column 22, lines 10-18; column 25, lines 33-49; column 35, lines 48-67; column 40, lines 45-65; and Figures 6, 7, 20, 21, 31, and 32). These features are advantageous for directing two welding wires through the welding torch and spreading welding energy over a wider area (column 5, lines 15-30; column 25, lines 33-49; and column 40, lines 45-65).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the consumable nozzle for electrosag



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welding, as disclosed by Tanenbaum, by using the oscillating guide tube and two or more longitudinal channels in the first strip, as taught by Bong et al., in order to direct two welding wires through the welding torch and spreading welding energy over a wider area (Bong et al.; column 5, lines 15-30; column 25, lines 33-49; and column 40, lines 45-65).

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Norcross and McDowell references are also cited to show related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin P. Kerns whose telephone number is (703) 305-3472. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (703) 308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-6078 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

KPK  
kpk  
March 20, 2002

  
M. ALEXANDRA ELVE  
PRIMARY EXAMINER